

Mars Pathfinder Egg Drop and Landing (EDL)

National Science Education Standards:

Standard A: Abilities of inquiry science

Standard E: Abilities of technological design

National Technology Education Standards:

NT.K-12.3 Technology Productivity Tools

NT.K-12.6 Technology Problem-Solving and Decision-Making Tools

Materials:

1 cereal box, 4 balloons, 5 m of string, newspaper,

1 egg, tape, scissors, ruler, pencil, hole punch

Lander

1. Starting with a cereal box, unfold the box
2. On one side of the box, trace an equilateral triangle, 22 cm (8.5 in) on a side.
3. Cut out the triangle and punch a single hole near each vertex.
4. Fold the triangle into a tetrahedron to form a "lander".
5. Place the egg inside the tetrahedron and tape closed along each seam.
6. Tie a 1-m (40 in) piece of string through the holes at the vertices.

Parachute

1. Unfold a large piece of newspaper.
2. Cut off the edge of the newspaper sheet to form a square.
3. Cut off each corner of the square to form an octagon.
4. Using four 1-m (40 in) pieces of string, tape each end of each string to adjacent corners of the octagon parachute.

Air Bags

1. Inflate four 25-cm (10 in) balloons.
2. Using tape rolled back on itself, tape each balloon to each face of the lander.
3. Gather the four strings on the parachute and tie them to the string on the lander.

Entry, Descent and Landing (EDL)

Drop your "Pathfinder" from a high place and see if your payload (egg) survives!

